

P Centella asiatica

Common Name(s)

Gotu Kola, Pennywort

How Used

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Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	1-METHYL-4-(1,2,2-TRIMETHYL-CYCLO-PENTYL)-BENZENE	Shoot	--	--	Jim Duke's personal files.
1	2,3-DIHYDROBENZOFURAN	Shoot	--	--	Jim Duke's personal files.
0	2-METHYL-BUTAN-2-OL	Shoot	--	--	Jim Duke's personal files.
0	3-GLUCOSYLKAEMPFEROL	Plant	--	--	
0	3-GLUCOSYLQUERCETIN	Plant	--	--	
0	7-GLUCOSYLKAEMPFEROL	Plant	--	--	
0	ALPHA-ALANINE	Plant	--	--	=ICMR(Indian Council of Medical Research).1976.Medicinal Plants of India.Vol.1.Indian Council of Med. Res.Cambridge Printing Works, New Delhi.487 pp;ICMR.1987.Medicinal Plants of India.Vol.2.Indian Council of Med. Res.Cambr. Printing Works,New Delhi.600pp

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference Citation
0	ALPHA-CHAMIGRENE	Shoot	--	--	Jim Duke's personal files.
0	ALPHA-COPAENE	Essential Oil	--	9000	-0.36082830563118673 Jim Duke's personal files.
2	ALPHA-HUMULENE	Shoot	--	--	Jim Duke's personal files.
28	ALPHA-PINENE	Plant	--	--	Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
28	ALPHA-PINENE	Essential Oil	--	2000	-0.5424708227492797 Jim Duke's personal files.
28	ALPHA-PINENE	Shoot	--	--	Jim Duke's personal files.
23	ALPHA-TERPINEOL	Shoot	--	--	Jim Duke's personal files.
5	ALUMINUM	Leaf	220	2060	1.430229610546625
0	AMINO BUTYRATE	Plant	--	--	Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
112	ASCORBIC-ACID	Plant	138	138	-0.5612889938563121
112	ASCORBIC-ACID	Leaf	40	374	-0.40921766271262444
0	ASH	Leaf	16050	150000	0.5487949419882225
1	ASIATIC-ACID	Plant	--	--	

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference Citation
0	ASIATICENTOIC-ACID	Plant	--	--	Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
19	ASIATICOSIDE	Leaf	700	1200	Jim Duke's personal files.
19	ASIATICOSIDE	Plant	--	--	
19	ASIATICOSIDE	Shoot	--	--	Jim Duke's personal files.
0	ASIATICOSIDE-A	Leaf	--	--	Jim Duke's personal files.
0	ASIATICOSIDE-B	Leaf	--	--	Jim Duke's personal files.
3	ASPARTIC-ACID	Plant	--	--	=ICMR(Indian Council of Medical Research).1976.Medicinal Plants of India.Vol.1.Indian Council of Med. Res.Cambridge Printing Works, New Delhi.487 pp;ICMR.1987.Medicinal Plants of India.Vol.2.Indian Council of Med. Res.Cambr. Printing Works,New Delhi.600pp
7	ASTRAGALIN	Leaf	--	--	Jim Duke's personal files.
0	BETA-ACORADIENE	Shoot	--	--	Jim Duke's personal files.
6	BETA-BISABOLENE	Shoot	--	--	Jim Duke's personal files.
53	BETA-CAROTENE	Leaf	40	369	0.46903611401255635
0	BETA-CARYOPHYLLENE	Essential Oil	--	125000	0.1933351753509813 Jim Duke's personal files.
0	BETA-CARYOPHYLLENE	Plant	--	--	

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference Citation
0	BETA-CARYOPHYLLENE	Shoot	--	--	Jim Duke's personal files.
0	BETA-CHAMIGRENE	Shoot	--	--	Jim Duke's personal files.
5	BETA-ELEMENE	Leaf	--	--	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
5	BETA-ELEMENE	Essential Oil	--	30000 -0.48593246550536906	Jim Duke's personal files.
0	BETA-FARNESENE	Plant	--	--	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
13	BETA-PINENE	Essential Oil	--	2000 -0.6859771042347549	Jim Duke's personal files.
13	BETA-PINENE	Plant	--	--	Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
5	BETA-SESQUIPELLANDRENE	Shoot	--	--	Jim Duke's personal files.
47	BETA-SITOSTEROL	Essential Oil	--	2000 1	Jim Duke's personal files.
47	BETA-SITOSTEROL	Plant	--	--	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference Citation
0	BETULIC-ACID	Plant	1100	1100	=ICMR(Indian Council of Medical Research).1976.Medicinal Plants of India.Vol.1.Indian Council of Med. Res.Cambridge Printing Works, New Delhi.487 pp;ICMR.1987.Medicinal Plants of India.Vol.2.Indian Council of Med. Res.Cambr. Printing Works,New Delhi.600pp
22	BETULINIC-ACID	Plant	1100	1100	-0.49265454919484347 Jim Duke's personal files.
0	BICYCLOELEMENE	Plant	--	--	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	BICYCLOELEMENE	Essential Oil	--	13000	Jim Duke's personal files.
0	BORNEOL-ACETATE	Essential Oil	--	2000	-0.745653834002719 Jim Duke's personal files.
0	BRAHMIC-ACID	Plant	970	970	
8	BRAHMINOSIDE	Plant	1600	1600	=ICMR(Indian Council of Medical Research).1976.Medicinal Plants of India.Vol.1.Indian Council of Med. Res.Cambridge Printing Works, New Delhi.487 pp;ICMR.1987.Medicinal Plants of India.Vol.2.Indian Council of Med. Res.Cambr. Printing Works,New Delhi.600pp

Chemical Plant Part	Low PPM	High PPM	StdDev	Reference	Citation
7 BRAHMOSIDE	Plant	3700	3700		=ICMR(Indian Council of Medical Research).1976.Medicinal Plants of India.Vol.1.Indian Council of Med. Res.Cambridge Printing Works, New Delhi.487 pp;ICMR.1987.Medicinal Plants of India.Vol.2.Indian Council of Med. Res.Cambr. Printing Works,New Delhi.600pp
28 CALCIUM	Leaf	1700	15890	-0.17404285585996676	
2 CAMPESTEROL	Plant	--	--		Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
2 CAMPESTEROL	Essential Oil	--	2000		Jim Duke's personal files.
9 CAMPHENE	Shoot	--	--		Jim Duke's personal files.
41 CAMPHOR	Essential Oil	--	--		
0 CARBOHYDRATES	Leaf	70192	656000	0.35111060724486526	
8 CARYOPHYLLENE-OXIDE	Shoot	--	--		Jim Duke's personal files.
0 CENTELLA-ASIATICA-COMPOUND-BK	Plant	--	--		Jim Duke's personal files.
0 CENTELIC-ACID	Plant	--	--		

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference Citation
0	CENTELLINIC-ACID	Plant	--	--	Williamson, E. M. and Evans, F. J., Potter's New Cyclopaedia of Botanical Drugs and Preparations, Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989.
0	CENTELLOSE	Plant	--	--	
0	CENTELLOSIDE	Plant	--	--	Williamson, E. M. and Evans, F. J., Potter's New Cyclopaedia of Botanical Drugs and Preparations, Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989.
0	CENTOIC-ACID	Plant	--	--	
24	CHROMIUM	Leaf	0.1	1	-0.5613457205769528
0	CINEOLE	Essential Oil	--	--	
2	COBALT	Leaf	0.8	7.3	-0.2554961829884984
9	DELTA-CADINENE	Shoot	--	--	Jim Duke's personal files.
2	ELAIDIC-ACID	Plant	--	--	
0	EO	Plant	3000	6000	-0.2841392284469577 Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	EO	Leaf	321	6000	-0.4868602567711417
0	EPIGLOBULOL	Shoot	--	--	Jim Duke's personal files.

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
17	FARNESOL	Shoot	--	--		Jim Duke's personal files.
0	FAT	Leaf	5992	56000	-0.00920837567589425	
15	FIBER	Leaf	20000	187000	0.3149049121779396	
0	FIBER(CRUDE)	Leaf	--	187000	1.5553583414475418	
0	FIBER(DIETARY)	Leaf	--	302000	-0.8718975702234967	
0	FURAN-2-CARBOXALDEHYDE	Shoot	--	--		Jim Duke's personal files.
11	GAMMA-TERPINENE	Essential Oil	--	4000	-0.767502970243684	Jim Duke's personal files.
11	GAMMA-TERPINENE	Shoot	--	--		Jim Duke's personal files.
35	GERANIOL	Shoot	--	--		Jim Duke's personal files.
0	GERMACRENE	Leaf	--	--		Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
2	GERMACRENE-D	Plant	--	--		
2	GERMACRENE-D	Essential Oil	--	160000	1	Jim Duke's personal files.
2	GERMACRENE-D	Shoot	--	--		Jim Duke's personal files.
7	GLUCOSE	Plant	--	--		Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.

Chemical Plant Part	Low PPM	High PPM	StdDev	Reference Citation
8 GLUTAMIC-ACID	Plant	--	--	=ICMR(Indian Council of Medical Research).1976.Medicinal Plants of India.Vol.1.Indian Council of Med. Res.Cambridge Printing Works, New Delhi.487 pp;ICMR.1987.Medicinal Plants of India.Vol.2.Indian Council of Med. Res.Cambr. Printing Works,New Delhi.600pp
12 GLYCINE	Plant	--	--	=ICMR(Indian Council of Medical Research).1976.Medicinal Plants of India.Vol.1.Indian Council of Med. Res.Cambridge Printing Works, New Delhi.487 pp;ICMR.1987.Medicinal Plants of India.Vol.2.Indian Council of Med. Res.Cambr. Printing Works,New Delhi.600pp
0 HEPT-TRANS-2-EN-1-AL	Shoot	--	--	Jim Duke's personal files.
0 HEPTAN-1-AL	Shoot	--	--	Jim Duke's personal files.
0 HEX-3-EN-2-ONE	Shoot	--	--	Jim Duke's personal files.
0 HEXAN-1-AL	Shoot	--	--	Jim Duke's personal files.
0 HYDROCOTYLEGENINS	Plant	--	--	Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
0 HYDROCOTYLIN	Plant	16	16	
0 INDOCENTELLOSIDE	Plant	--	4000	Jim Duke's personal files.
0 INDOCENTOIC-ACID	Plant	--	--	

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference Citation
8	INOSITOL	Plant	--	--	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
6	IRON	Leaf	3	29	-0.8470707525252408
0	ISOBRAHMIC-ACID	Plant	9000	9000	=ICMR(Indian Council of Medical Research).1976.Medicinal Plants of India.Vol.1.Indian Council of Med. Res.Cambridge Printing Works, New Delhi.487 pp;ICMR.1987.Medicinal Plants of India.Vol.2.Indian Council of Med. Res.Cambr. Printing Works,New Delhi.600pp
22	ISOQUERCITRIN	Leaf	--	--	Jim Duke's personal files.
0	ISOTHANKUNIC-ACID	Plant	--	--	
0	ISOTHANKUNISIDE	Plant	--	--	
75	KAEMPFEROL	Plant	--	--	
75	KAEMPFEROL	Leaf	--	--	Jim Duke's personal files.
0	KILOCALORIES	Leaf	340	3180	0.2609973458508899 CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	LIGNOCENE	Plant	--	--	Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
1	LIGNOCERIC-ACID	Plant	--	--	

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference Citation
60	LIMONENE	Shoot	--	--	Jim Duke's personal files.
53	LINALOOL	Shoot	--	--	Jim Duke's personal files.
0	LINAMARASE	Leaf	--	--	Jim Duke's personal files.
27	LINOLEIC-ACID	Plant	--	--	
0	M-XYLENE	Shoot	--	--	Jim Duke's personal files.
0	MADASIATIC-ACID	Plant	--	--	J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
0	MADECASSIC-ACID	Plant	--	--	
2	MADECASSOSIDE	Plant	--	--	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
2	MADECASSOSIDE	Shoot	--	--	Jim Duke's personal files.
65	MAGNESIUM	Leaf	342	3200	-0.3574611579280929
14	MANGANESE	Leaf	3	27.7	-0.41383578503505414
0	MEDICASSIC-ACID	Plant	--	--	J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
0	MESO-INOSITOL	Plant	--	15	Jim Duke's personal files.

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference Citation
0	MESOINOSITAL	Plant	--	--	=ICMR(Indian Council of Medical Research).1976.Medicinal Plants of India.Vol.1.Indian Council of Med. Res.Cambridge Printing Works, New Delhi.487 pp;ICMR.1987.Medicinal Plants of India.Vol.2.Indian Council of Med. Res.Cambr. Printing Works,New Delhi.600pp
2	METHANOL	Plant	--	--	
0	MYO-INOSITOL	Plant	--	--	
22	MYRCENE	Essential Oil	--	6000	-0.3653970753458515 Jim Duke's personal files.
22	MYRCENE	Shoot	--	--	Jim Duke's personal files.
0	N-DODECANE	Essential Oil	--	--	
10	NEROL	Shoot	--	--	Jim Duke's personal files.
11	NEROLIDOL	Shoot	--	--	Jim Duke's personal files.
39	NIACIN	Leaf	12	112	0.17636268788895457
0	NON-3-EN-2-ONE	Shoot	--	--	Jim Duke's personal files.
0	OCT-TRANS-2-EN-1-AL	Shoot	--	--	Jim Duke's personal files.
18	OLEIC-ACID	Plant	--	--	

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
2	OXYASIATICOSIDE	Plant	--	--		Williamson, E. M. and Evans, F. J., Potter's New Cyclopaedia of Botanical Drugs and Preparations, Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989.
0	P-CYMOL	Plant	--	--		Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	P-VINYL-GUAIACOL	Shoot	--	--		Jim Duke's personal files.
13	PALMITIC-ACID	Plant	--	--		
24	PECTIN	Leaf	6420	60000	0.848030969096559	
0	PETAN-1-AL	Shoot	--	--		Jim Duke's personal files.
4	PHELLANDRENE	Plant	--	--		Jim Duke's personal files.
4	PHOSPHORUS	Leaf	300	2800	-0.39951935749949974	
0	POLYACETYLENES	Root	--	--		Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
0	POPULNIN	Leaf	--	--		Jim Duke's personal files.
14	POTASSIUM	Leaf	414	3870	-1.169036049980163	
0	PROTEIN	Leaf	16050	150000	-0.6169641238666383	
3	PYRIDINE	Shoot	--	--		Jim Duke's personal files.

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference Citation
176	QUERCETIN	Plant	--	--	Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
1	RAFFINOSE	Plant	--	--	
0	RESIN	Plant	--	--	Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
0	RHAMNOSE	Plant	--	--	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
15	RIBOFLAVIN	Leaf	1.4	13	-0.11692421020247182
0	SAPONIN	Plant	11000	80000	1.6640036208230826
5	SAPONINS	Leaf	268	2500	-1.0907412926645894
60	SELENIUM	Leaf	0.1	1.2	-0.29034536355768803
4	SILICON	Leaf	1.5	14	-0.37155124751733193
1	SODIUM	Leaf	1113	10400	1.1998266498363401
8	STEARIC-ACID	Plant	--	--	
12	STIGMASTEROL	Essential Oil	--	2000	Jim Duke's personal files.

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference Citation
12	STIGMASTEROL	Plant	40	40	-0.8073781309648732 =ICMR(Indian Council of Medical Research).1976.Medicinal Plants of India.Vol.1.Indian Council of Med. Res.Cambridge Printing Works, New Delhi.487 pp;ICMR.1987.Medicinal Plants of India.Vol.2.Indian Council of Med. Res.Cambr. Printing Works,New Delhi.600pp
0	SUGARS	Leaf	9630	90000	0.3611228146781439
35	TANNIN	Plant	--	--	Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
0	THANKUNIC-ACID	Plant	--	--	
0	THANKUNISIDE	Plant	--	--	
31	THIAMIN	Leaf	1.5	14	1.1869303740705777
0	THIAMINE	Leaf	1.5	14	2.1449383339093373
4	TIN	Leaf	1.3	12	-0.4331991239429111
1	TOLUENE	Shoot	--	--	Jim Duke's personal files.
2	TRANS-BETA-FARNESENE	Plant	--	--	
0	VELLARINE	Plant	--	--	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
0	WATER	Plant	893000	893000	0.5225843122637761	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	WATER	Leaf	--	893000	0.4258710730214559	
0	WIDDRENE	Shoot	--	--		Jim Duke's personal files.
77	ZINC	Bark	34	3.4	-0.9069023286651865	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
77	ZINC	Leaf	0.4	3.4	-0.5059022324796413	